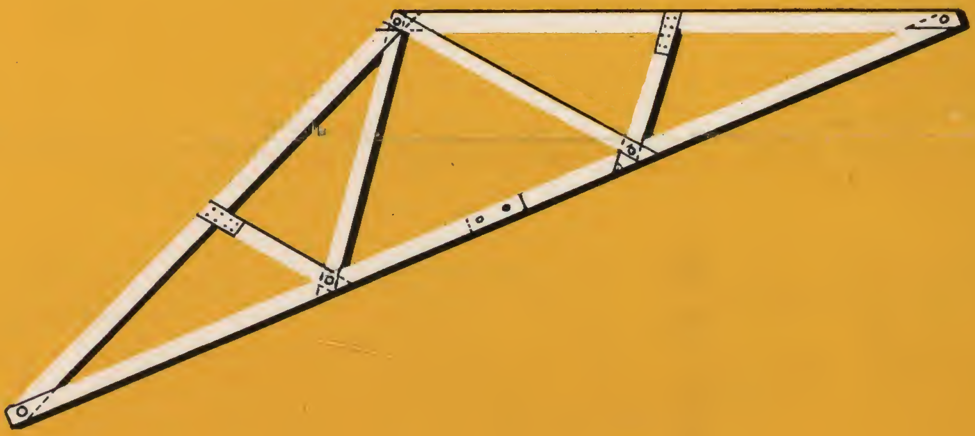
# Clear Span

# Teco Trussed Rafters

# in

# MODERN HOME PLANNING

> *"Most savings of any importance can be attributed to one item—the use of a roof truss, which left one large open room in which to work."*
>
> Report of Small Homes Council
> University of Illinois
> April 1948



**Prepared for**

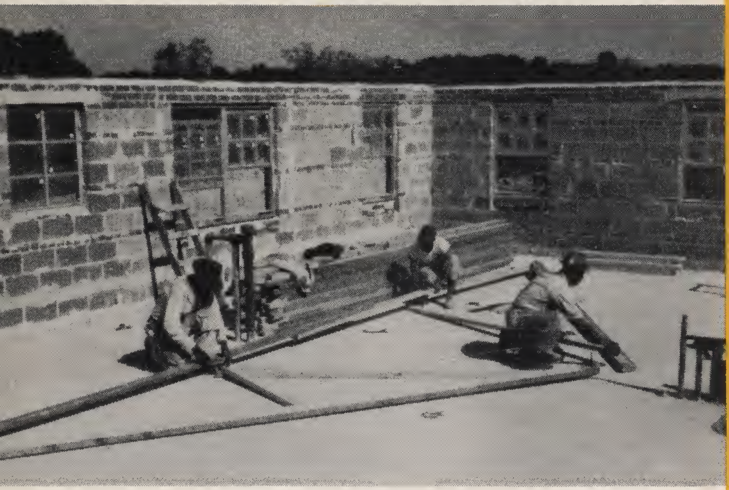
**Architects, Designers, Contractors, Builders and Financial Institutions**

by **TIMBER ENGINEERING COMPANY**
1319 18th Street, N. W.
Washington 6, D. C.

Field Offices in New Orleans, La., and in Chicago, Ill.

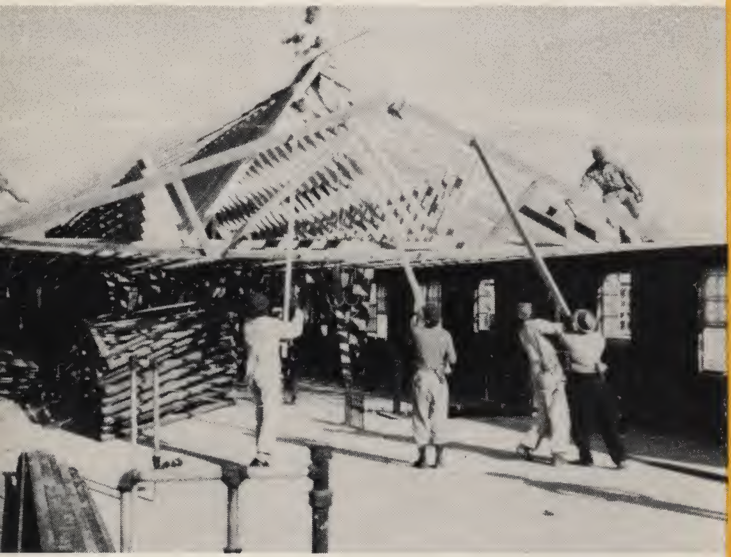
## fabrication

Common 2 x 4's and 2 x 6's are used for Teco Trussed Rafters. Cutting and boring can be done in a convenient plant or on the site.



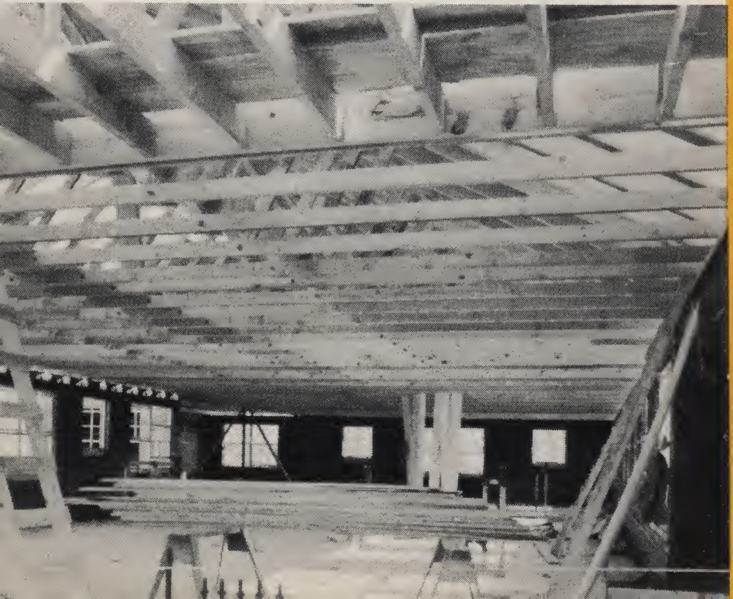
## assembly

Teco Trussed Rafters are easily assembled on the site by common labor without special facilities, although some builders prefer to use a portable waist-high jig.



## erection

From 3 to 5 men are generally used to erect the completed trusses, which may be placed by hand, or with a gin pole or crane.



## clear-span work space

Requiring no load-bearing partitions, Teco Trussed Rafters place a project under cover more rapidly. The clear work space thus secured effects large time, labor and materials savings by permitting greater flexibility of operation for the mechanical trades.

# the **economics** of trussed rafters

Clear-span trussed rafter construction *alone* can result in labor and lumber savings up to 30% as compared with conventional roof and ceiling framing.

*In addition*, as David S. Miller, President of the Producers' Council, points out, even greater savings are possible in the interior installations *after* the roof is on. Commenting upon a Small Homes Council report of the construction of three Industry Engineered Homes using 16 foot span trusses spaced two feet on centers, Mr. Miller says:

> *"It was found that many important savings came from the use of the roof truss, which left one large open room in which to work. In addition to savings in the installation of floor, ceiling and wall surface materials, the following advantages were found: the entire job was under roof in a minimum of time; the open interior space was made available to plumbing, heating and electrical contractors in a minimum of time after the job was started; the exterior work can be done by the carpenters while the mechanical trades are working on the inside; there is complete freedom for the plumber in particular because he can make his layout in the simplest possible fashion and not be required to dodge around and through studs with inflexible pipe and fittings; chimney construction was easier."*

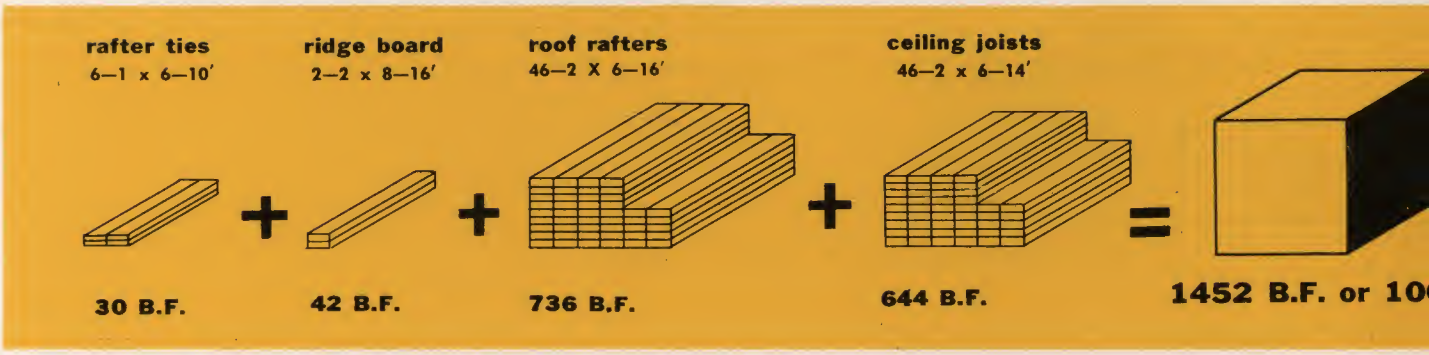
### time

Time savings are worth more than so many dollars per job. They mean more structures per year—more families and enterprises under new roofs. The time of plumbing installations may be cut as much as 50% under clear-span trussed rafters. Wallboard installation requires 30% fewer manhours, and finish flooring 20% fewer when installed before partitions are erected. Clear-span trussed rafters are time savers.

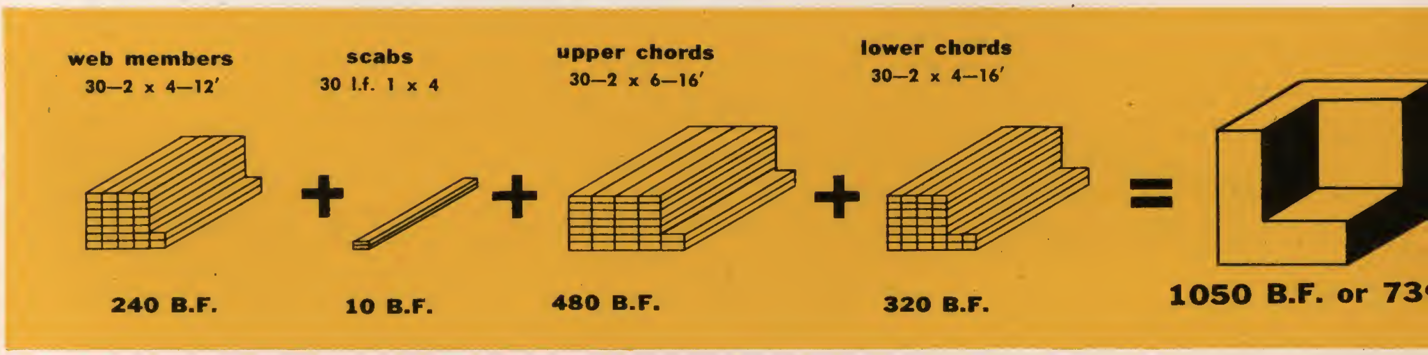
### labor

Fewer units to handle in the air mean better supervision, greater efficiency. Clear-span trussed rafters permit more trades to work under cover at one time. Weather ceases to be a factor once the roof is on, and less time is lost due to this factor.

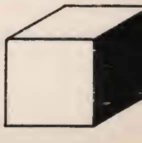
old style joists and rafters * - - bearing partition needed



Teco Trussed Rafters * - - no bearing partition needed



**total lumber saved 402 B.F. or 27%**



* figures based on 26′ x 32′ interior dimension house

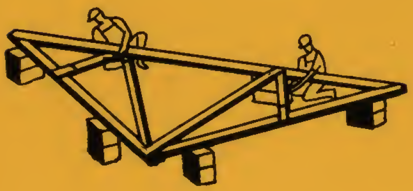
# the mechanics of the Teco Trussed Rafter

## plant or site fabrication

Because clear-span Teco Trussed Rafters require only standard lumber and tools, materials may be cut and bored at a convenient plant or yard, or at the site.

## assembly

The design of Teco Trussed Rafters makes turning during assembly unnecessary. The entire truss may be assembled by common labor on a level floor of one of the units. With only four basic members required, there are no right- or left-hand members to confuse the workers. Some builders prefer a simple, portable jig which can be skidded around the project or set up in a spot accessible to trucks.

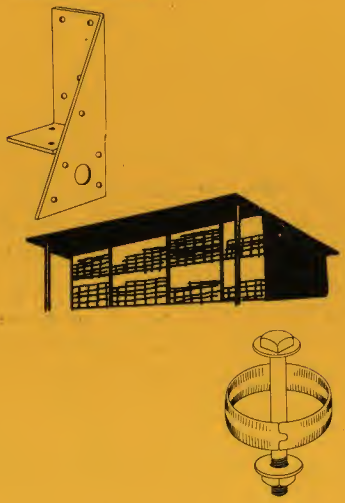


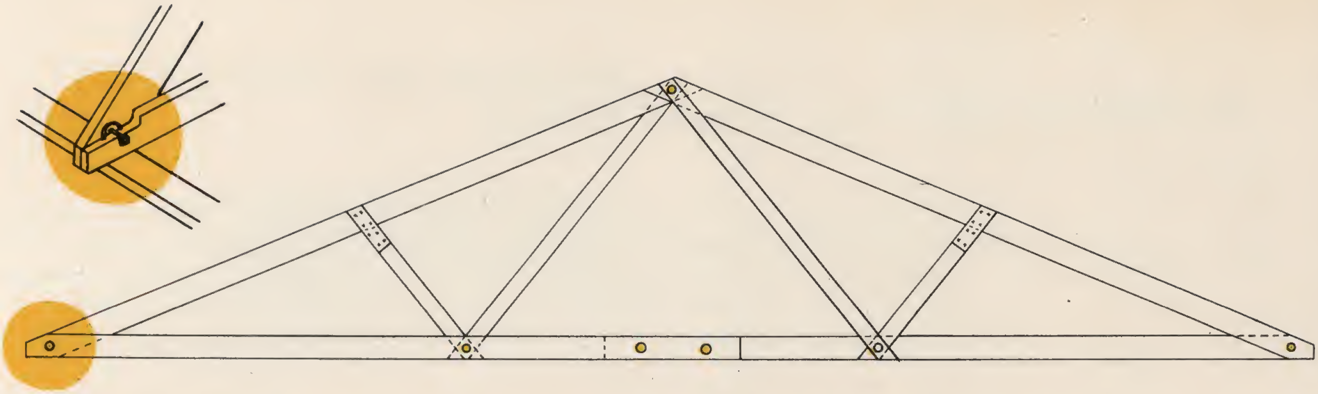
## erection

Completed Teco Trussed Rafters are erected by a crew of from three to five men, the number depending upon the span of the truss. One or two of these men work on the floor and one on each supporting wall. Sometimes an additional man works at the apex, securing the truss with sheathing at or near the peak. Teco Trip-L-Grip framing anchors automatically space trusses as they go into place.

## materials

Teco split ring timber connectors, bolts and washers, Teco Trip-L-Grip framing anchors, and common 2 x 4 and 2 x 6 lumber, comprise the materials for making and installing clear-span Teco Trussed Rafters. The only tools needed are a power saw, power drill and a split-ring grooving tool.





## Teco Trussed Rafter Designs, available upon request

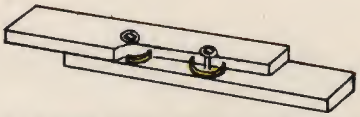
**for wet wall construction**

| Design number | Span | Roof Slope |
|---|---|---|
| 590A | 20′ to 32′ | 4″ in 12″ |
| 590B | 20′ to 32′ | 5″ in 12″ |
| 590C | 20′ to 32′ | 6″ in 12″ |
| 590D | 20′ to 32′ | 7″ in 12″ |

**for dry wall construction**

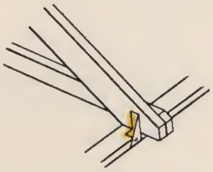
| Design number | Span | Roof Slope |
|---|---|---|
| 585A | 20′ to 32′ | 4″ in 12″ |
| 585B | 20′ to 32′ | 5″ in 12″ |
| 585C | 20′ to 32′ | 6″ in 12″ |
| 585D | 20′ to 32′ | 7″ in 12″ |

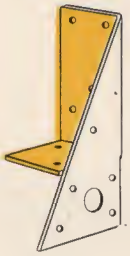
## Teco Split Ring Timber Connectors



For wood-to-wood connections such as are made in Teco Trussed Rafters, Lank-Teco Trusses and in all other good timber construction, the Teco Split Rings cut costs and increase shear strength of the connection. Their use means lumber and labor savings. Detailed information sent upon request.

## Teco Trip-L-Grip Framing Anchors

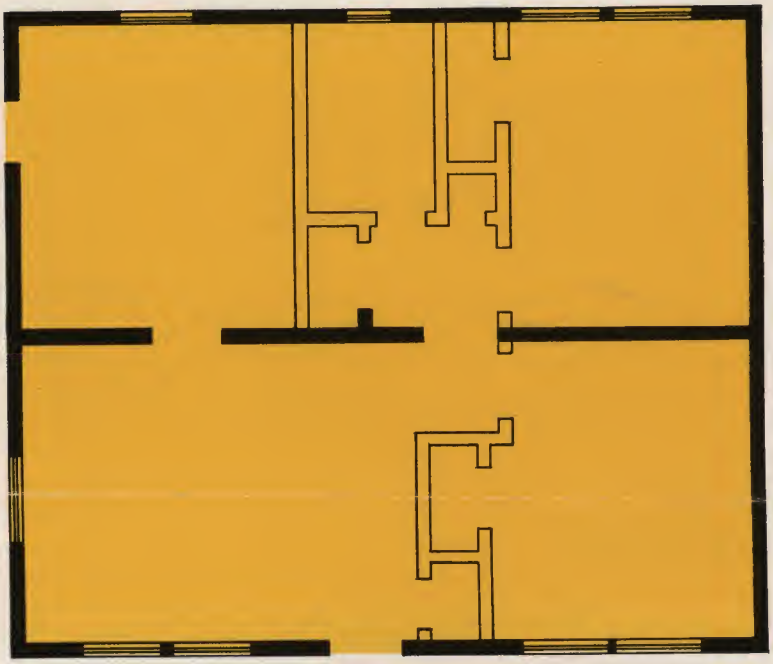




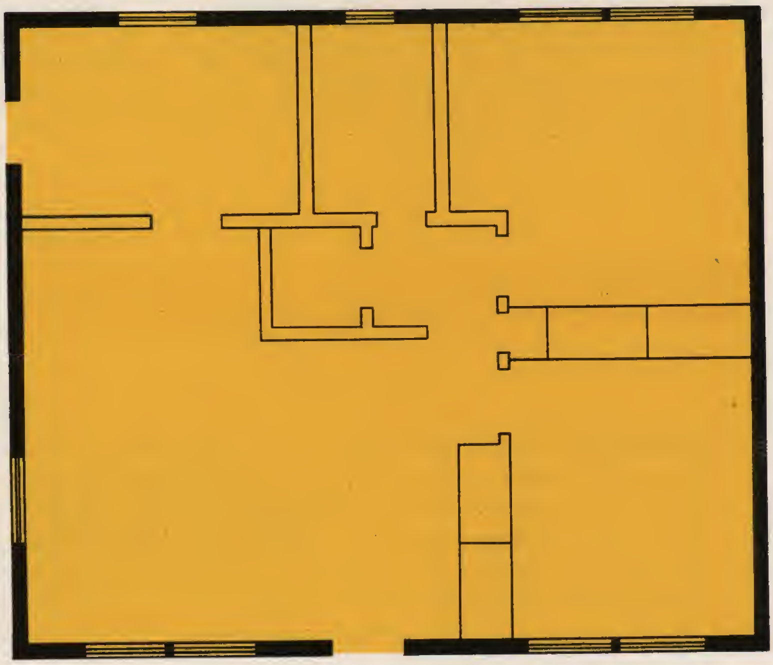
These simple little devices are valuable time savers during the erection of trussed rafters. Spaced on the plate in advance, they permit the erection crew to raise the truss into place, push it against the framing anchor and drive a few nails through holes punched in the anchor. Not only is the truss accurately and speedily placed, but, the roof is secured against uplift due to high winds. Information on the many other uses of these Teco Trip-L-Grip framing anchors is available upon request.

# PLANNING with Teco Trussed Rafters

As the magazine-reading and home-show-going public is now well aware, modern design is not just a new look for building exteriors. The real modernism is in better space use and the opening up of the interior. It is making the American home, be it apartment or house, the friendliest place in the world. To plan interiors well, the architect must have freedom. Clear-span trussed rafters offer this freedom.



**with conventional construction** the planner is severely restricted in his interior arrangements by the limitations imposed by load-bearing partitions. The current trend toward opened-up interiors, with less-than-ceiling-height partitions and cabinets separating some areas, and a growing demand for hung accordion and heavy drape methods of compartmentation, make the clear-span trussed rafter the key that unlocks the door to planning freedom for residential designers.



**with clear span Teco Trussed Rafters** the space is all yours, to do with as the needs of the occupant and your own resourcefulness and talent dictate. The construction engineer is not the only beneficiary of this clear space. Designer and client also gain from the use of clear-span trussed rafters.

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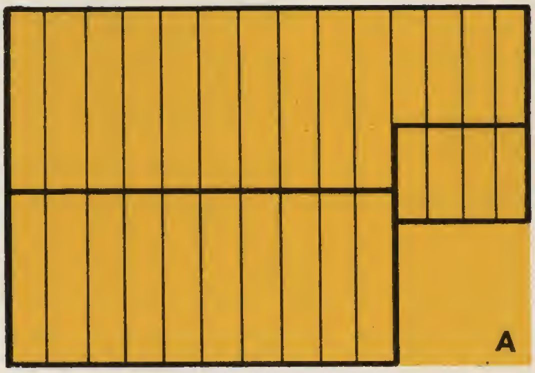
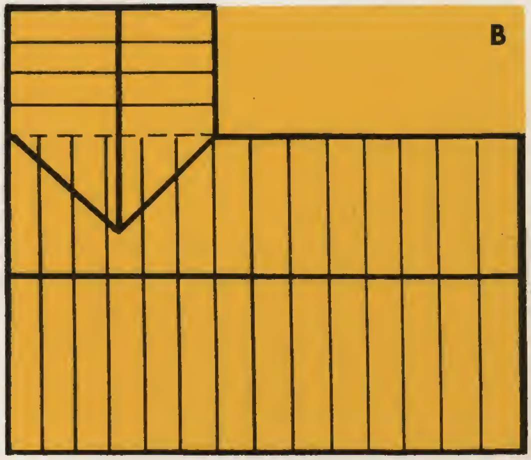
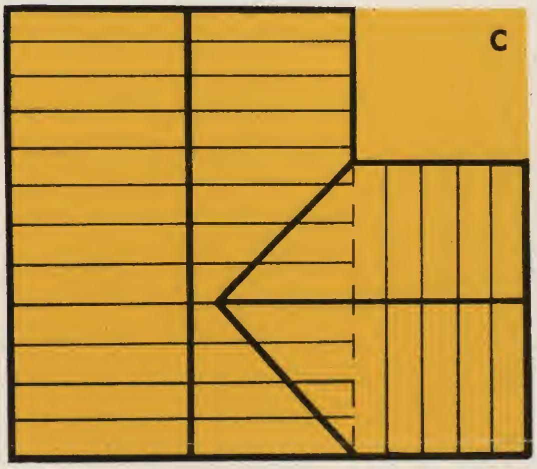
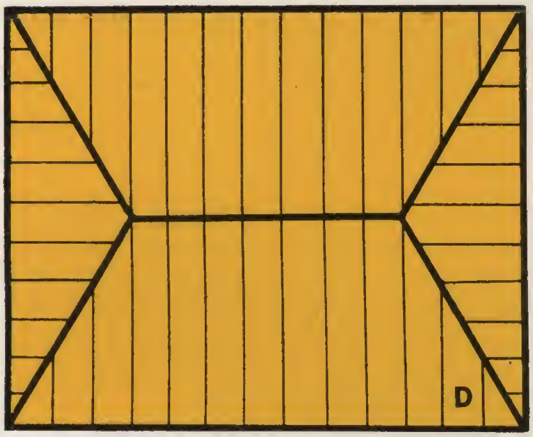
## ROOF PLAN not restricted

Teco Trussed Rafters do not limit the designer to any particular roof plan. Nor does their use on certain roof arrangements add to the cost of the job.









**A.** Teco Trussed Rafters over main portion with short-span trussed rafters or conventional framing over extension.

**B** and **C.** Teco Trussed Rafters over main portion on partition or beam at ell with short-span trussed rafters or conventional framing over extension.

**D.** Teco Trussed Rafters over central portion with special framing for hip ends.

## ROOF TRUSSES for other types of construction

Planners of housing, commercial and industrial structures have at their disposal considerable extremely useful literature on roof trusses. Typical details for trusses for many types of structures, and economic and technical data, are available to help the planner determine the most desirable solution to each problem. Trussed rafters for small commercial structures have been developed and are available. Write to Timber Engineering Company, 1319 18th Street, N. W., Washington 6, D. C., giving a brief outline of your problem.

## built with TECO TRUSSED RAFTERS

Top right: Residence, Northbrook, Ill.
C. E. Blomgren, architect and builder.

Top left: Residence, Cleveland, Ohio.
Austin Damon, architect. Bruscino Builders.

Left: Apartment units, Barcroft, Virginia.
Albert Lueders, architect; DeLashmuth Bros., Inc., builders.

Bottom left: Residence, Northbrook, Ill.
C. E. Blomgren, architect and builder.

Bottom right: Row houses, Alexandria, Virginia.
Mills and Petticord, architects. Landrith and Olmi, builders.

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